

CLAIMS LISTINGS

What is claimed is:

1. (Currently Amended) A system which is used to evaluate the speech quality of a call between telephone terminals via a packet network, said system comprising:

a sound signal transmitter which transmits sound signals;

a first packet capturing device which captures a first packet which corresponds to said sound signals;

a sound signal receiver which receives said sound signals which have become degraded while passing through said packet network;

a second packet capturing device which captures a second packet that corresponds to said sound signals which have become degraded; and

a speech quality evaluation means which evaluates the speech quality of a call between said telephone terminals using: (a) sound signals which are transmitted by said sound signal transmitter; (b) sound signals which are received by said sound signal receiver; and (c) a sound delay associated with the transmission of said first packet; and ~~(d) that is received as~~ said second packet, the sound delay being used as a packet delay.

2. (Currently Amended) The system of claim 1 wherein said first packet capturing device and said second packet capturing device capture a packet which corresponds to a sound part in said sound signals[[:]].

3. (Original) The system of claim 1 wherein said speech quality evaluation means determines the amount of sound delay by comparing: (1) said sound signals which are transmitted by said sound signal transmitter; (2) said sound signals which are received by said sound signal receiver for each sound part in the respective signals; and (3) evaluates the speech quality of a call between said telephone terminals using said amount of sound delay.

4. (Cancelled)

5. (Original) The system of claim 1 wherein the system is provided with:

a means which decodes the first decoded sound signals from said first packet; and
a means which decodes the second decoded sound signals from said second packet;

said speech quality evaluation means determines the amount of sound delay by comparing: (1) said first decoded sound signals; and (2) said second decoded sound signals and evaluates the speech quality of a call between said telephone terminals using said amount of sound delay.

6. (Currently Amended) The system of claim 5 wherein the comparison between said first decoded sound signals and said second decoded sound signals is carried out for each sound part.

~~said packet capturing device~~

7. (Original) The system of claim 3 wherein said speech quality evaluation means evaluates the speech quality of a call between said telephone terminals by determining the R-value using said amount of sound delay.

8. (Original) The system of claim 5 wherein said speech quality evaluation means evaluates the speech quality of a call between said telephone terminals by determining the R-value using said amount of sound delay.

9. (Currently Amended) The system of ~~claim 4~~ claim 1 wherein said speech quality evaluation means evaluates the speech quality of a call between said telephone terminals by determining the R-value using said amount of packet delay.

10. (Original) The system of claim 8 wherein the system is provided with a display means, said display means displaying in a time series format the mean value in a prescribed period of time for the R-value which is determined using said speech quality evaluation means; the amplitude of the fluctuations in the mean value within said prescribed period of time for the R-value which is determined is displayed in overlapping fashion.

11. (Original) The system of claim 10 wherein said display displays the amount of delay and any defects which have been determined by partitioning into multiple sections the communication between the telephone terminals when the location at which said R-value was degraded has been selected on the display screen.
12. (Original) The system of claim 1 wherein the evaluation being carried out in prescribed time units whether or not the evaluation of the communication between said telephone terminals has been completed.
13. (Original) The system of claim 12 wherein said system carries out the evaluation in said prescribed time units or carries out the evaluation while changing the combination of said telephone terminals according to a schedule.
14. (Original) The system of claim 12 wherein said sound signals which are transmitted by said sound signal transmitter are adjusted so that the evaluation of the communication between said telephone terminals is completed within the prescribed period of time.
15. (Original) The system of claim 1 wherein the system is provided with
a database means, said database means storing at least one of the following: sound signals which are transmitted by said sound signal transmitter; sound signals which are received by said sound signal receiver; said first packet; and said second packet, when the quality of the speech which has been evaluated becomes degraded in comparison with the prescribed value.
16. (Original) The system of claim 1 wherein said first packet capturing device and said second packet capturing device are provided with a time synchronization means, said capturing means storing a packet which has been captured along with the time stamp showing synchronization.

17. (Original) The system of claim 1 wherein said sound signals which are transmitted by said sound signal transmitter are the recorded natural voice of the person using said telephone terminal.

18. (Original) A system which evaluates the speech quality of a call between telephone terminals via a packet network, said system comprising:

- a sound signal transmitter;
- a first packet capturing device;
- a second packet capturing device; and
- a sound signal receiver;

said sound signal transmitter sends sound signals relative to said sound signal receiver;

said first packet capturing device captures the first packet which corresponds to said sound signals;

said sound signal receiver receives said sound signals which have become degraded in passing through said packet network;

said second packet capturing device captures the second packet which corresponds to the sound signals which have become degraded;

said system further comprises:

a device which determines the first amount of sound delay wherein the first decoded sound signals are decoded from the first packet capturing device and which compares (a) the sound signals which have been transmitted by said sound signal transmitter and (b) said first decoded sound signals;

a device which determines the second amount of sound delay wherein the second decoded sound signals are decoded from the second packet capturing device and compares: (a) said first decoded sound signals and (b) said second decoded sound signals; and

a device which determines the third amount of sound delay by comparing: (a) the sound signals which are received by said sound signal receiver and (b) said second decoded signals.

19. (Original) A system which evaluates the speech quality of a call between telephone terminals via a packet network, said system comprising:

a device which determines the amount of packet delay;

said packet delay amount determining device determines the amount of delay for a packet which corresponds to the sound part of a sound signal, said packet passing through said packet network.

20. (Original) The system of claim 18 wherein said device used to determine the amount of packet delay decodes said sound signals from a packet which corresponds to the sound part of said sound signals, determines the amount of sound delay and uses this as the packet delay.

21. (Currently Amended) A system which is used to evaluate the quality of speech between telephone terminals via a packet network, said system comprising:

a device which determines the amount of packet delay; and

a device which determines the R-value;

said packet delay determining device determines the amount of delay for a packet which corresponds to the sound signals which travel through said network for each packet; or it determines the amount of delay for a packet which corresponds to the sound part of sound signals of those packets which travel through said packet network;

said R-value determining device determines the R-value which changes for each packet or for each sound part using the amount of delay for a packet, the delay of which has been ~~determines~~determined.

22. (Currently Amended) A system which is provided with a ~~means—device~~ which determines the amount of sound delay and evaluates the speech quality of a call between telephone terminals using the amount of sound delay ~~which is determined by said means which is used to determine the amount of sound delay, said system comprising:~~

wherein said device used to determine the amount of sound delay comprises ~~which a device that~~ determines the amount of sound delay for the sound signals which are exchanged between said telephone terminals for each sound part in the sound signals.

23. (Original) The system of claim 22 further comprising a device which transmits sound signals, said sound signals being adjusted so that the evaluation of the communication between said telephone terminals is completed within said prescribed period of time;

24. (Original) A system which evaluates the speech quality of a call between telephone terminals via a packet network, said system carries out the speech quality evaluation of the communication between said telephone terminals in prescribed time units whether or not said evaluation has been completed.

25. (Original) The system of claim 24 wherein said system carries out the evaluation in said prescribed time units or carries out the evaluation while changing the combination of said telephone terminals according to a schedule.

26. (Original) A system for evaluating the speech quality of a call between telephone terminals via a packet network, said system:

a database;

said database stores either sound signals or packet data or both of these which are related to the call between said telephone terminals when the speech quality of a call which has been evaluated is degraded when compared to the prescribed value.

27. (Original) A system for evaluating the speech quality of a call between telephone terminals via a packet network, said system comprising:

an R-value determining device; and

a display;

said display displays in a time series format the mean value in a prescribed period of time for the R-value which is determined by said device used to determine the R-value; it displays in overlapping fashion the amplitude of the fluctuations in the mean value within said prescribed period of time for the R-value which is determined.

28. (Original) The system of claim 27 wherein said display displays the amount of delay and any defects which have been determined by partitioning the communication between the telephone terminals into multiple sections.

29. (Original) A system which evaluates the speech quality of a call between telephone terminals, said system comprising:

- a device used to determine the amount of delay; and

- a display;

- said display displays in a time series format the mean value at a prescribed period of time for the amount of delay which is determined by said device used to determine the amount of delay, and displays the amplitude of fluctuations in the mean value in said prescribed period of time which is determined in overlapping fashion.

30. (Original) An apparatus which determines the amount of packet delay between a first point and a second point in a packet network, said apparatus comprising:

- a device which captures a first packet at a first point;

- a device which captures a second packet at a second point;

- a first decoder which decodes a first sound signal from the first packet;

- a second decoder which decodes a second sound signal from the second packet;

and

- a device which determines the amount of sound delay by comparing said first sound signal and said second sound signal and uses said amount of sound delay as the amount of packet delay between said first point and said second point.

31. (Original) The apparatus of claim 30 wherein the comparison is made between said first sound signal and said second sound signal for each sound part of the respective signals.

32. (Original) An apparatus which is used to determine the amount of delay, said apparatus comprising:

- a transmitter which is used to transmit sound signals;

a packet capturing device which is used to capture a packet which corresponds to said sound signals; and

a decoder which is used to decode sound signals from a packet which has been captured by said packet capturing device; and which compares said sound signals and said decoded sound signals and determines the amount of sound delay.

33. (Original) The apparatus of claim 32 wherein a comparison of said sound signals and said sound signals which have been decoded is made for each sound part of the respective signals.

34. (Original) An apparatus which is used to determine the amount of delay, said apparatus comprising:

a receiver which is used to receive the sound signals;

a packet capturing device which captures a packet which corresponds to said sound signals; and

a decoder which is used to decode the sound signals from a packet which has been captured by said packet capturing device; compares said sound signals and said sound signals which have been decoded and determines the amount of sound delay.

35. (Original) The apparatus of claim 34 wherein a comparison of said sound signals and said sound signals which have been decoded is made for each sound part of the respective signals.

36. (Original) An apparatus for determining the amount of sound delay, said apparatus comprising:

a transmitter which is used to transmit the sound signals;

a receiver which is used to receive said sound signals; and

a device which is used to determine the amount of sound delay by comparing: (a) said sound signals which are transmitted by said transmitter; and (b) said sound signals which are received by said receiver for each sound part of the respective signals.